

Notice of Allowability

Application No.

09/936,924

Examiner

Michael P. Stafira

Applicant(s)

ULRICHSEN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 1/27/2005.
2. ☒ The allowed claim(s) is/are 66-124.
3. ☒ The drawings filed on 19 September 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Allowable Subject Matter

1. Claims 66-124 are allowed over the prior art of record.
2. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 66, the prior art fails to disclose or make obvious an apparatus for automatically inspecting matter having a data-obtaining means connected to the detecting means and serving to obtain the detection data therefrom, the arrangement being such that the beams of the varied medium which are received at the detecting means and emanate from the respective detection zones travel along respective paths from the matter to the mirror which paths converge continuously with respect to each other from the matter to the mirror and do not substantially coincide with any significant part of the path of the emitted detection medium from the emitting means to the matter, and in combination with the other recited limitations of claim 86. Claims 67-85 are allowed by the virtue of dependency on the allowed claim 66.

Regarding claim 86, the prior art fails to disclose or make obvious a method of automatically inspecting matter having the beams of the varied medium which are received at the detecting means and emanate from the respective detection zones traveling along respective paths from the matter to the mirror which paths converge continuously with respect to each other

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from the matter to the mirror and do not substantially coincide with an significant part of the path of the emitted detection medium from the emitting means to the matter, and in combination with the other recited limitations of claim 86. Claims 87-100 are allowed by the virtue of dependency on the allowed claim 86.

Regarding claim 101, the prior art fails to disclose or make obvious an apparatus for automatically inspecting matter having a rotary polygonal mirror arranged to receive directly from the matter detection medium varied by variations in the matter, and in combination with the other recited limitations of claim 101. Claim 102 is allowed by the virtue of dependency on the allowed claim 101.

Regarding claim 103, the prior art fails to disclose or make obvious an apparatus for automatically inspecting matter having a rotary polygonal mirror arranged to receive from a multiplicity of detection zones at said matter detection medium varied by variations in said matter, a planar mirror by way of which said rotary polygonal mirror receives the varied medium, detecting means serving to receive the varied medium by rejection from the rotary polygonal mirror, to detect a plurality of wavelengths of said varied medium substantially simultaneously, and data-obtaining means connected to said detecting means and serving to obtain said detection data therefrom, the planar being arranged to reflect varied medium from at least some of said multiplicity of detection zones, and in combination with the other recited limitations of claim 103.

Regarding claim 104, the prior art fails to disclose or make obvious a method of automatically inspecting matter having the steps of emitting a beam of detection medium so that said beam scans said matter in a traversing manner, receiving the varied medium at detecting

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means, generating detection data from said detecting means in dependence upon the variations in said medium and identifying at least one of said materials from said data, and in combination with the other recited limitations of claim 104. Claims 105, 106 are allowed by the virtue of dependency on the allowed claim 104.

Regarding claim 107, the prior art fails to disclose or make obvious an apparatus for automatically inspecting matter having an emitting means serving to emit a scanning beam of detection medium to scan said matter in a traversing manner, and data-obtaining means connected to said detecting means and serving to obtain said detection data therefrom and to identify at least one of said materials from said data, and in combination with the other recited limitations of claim 107. Claims 108, 109 are allowed by the virtue of dependency on the allowed claim 107.

Regarding claims 110, 113, the prior art fails to disclose or make obvious a method or apparatus of automatically inspecting matter for varying compositions having the step of using a camera to detect spatial characteristics of the objects and generating data dependence upon the spatial characteristics, and in combination with the other recited limitations of claim 113. Claims 111, 112 are allowed by the virtue of dependency on the allowed claim 110.

Regarding claim 114, the prior art fails to disclose or make obvious a method of automatically inspecting matter having the steps of receiving the varied medium at receiving means from, in turn, groups of detection spots at said matter, whereof each group contains a plurality of said detection spots and provides one of a plurality of detection zones, with the varied medium from all of the detection spots in each group being received substantially simultaneously, generating detection data for each detection zone in dependence upon the

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variations in said medium at the detection zone, and identifying at least one of said materials from said data, and in combination with the other recited limitations of claim 114. Claim 115 is allowed by the virtue of dependency on the allowed claim 114.

Regarding claim 116, the prior art fails to disclose or make obvious an apparatus for automatically inspecting matter having a receiving means serving to receive detection medium varied by variations in the composition of said matter from, in turn, groups of detection spots at said matter, whereof each group contains a plurality of said detection spots and provides one of a plurality of detection zones, with the varied medium from all of the detection spots in each group being received substantially simultaneously, detecting means serving to generate detection data in dependence upon the variations in said medium at each detection zone, and data-obtaining means connected to said detecting means and serving to obtain said detection data therefrom and to identify at least one of said materials from said data, and in combination with the other recited limitations of claim 116.

Regarding claim 117, the prior art fails to disclose or make obvious an apparatus for automatically inspecting a stream of matter having a first and second receiving means of the respective first and second inspection arrangement separate from each other and arranged to receive from the matter detection medium varied by variations in the matter, and in combination with the other recited limitations of claim 117. Claims 118, 119 are allowed by the virtue of dependency on the allowed claim 117.

Regarding claim 120, the prior art fails to disclose or make obvious an apparatus for automatically inspecting a stream of matter comprising emitting means serving to emit a detection medium, which comprises radiation, as a scanning beam to irradiate in a traversing

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manner a path over said matter, inspecting means arranged to inspect the irradiated path at an oblique angle to said matter, and ascertaining means arranged to ascertain from that inspection the general profile of that path, and in combination with the other recited limitations of claim 120.


Regarding claim 121, the prior art fails to disclose or make obvious a method of inspecting a stream of matter having the steps of emitting from emitting means a detection medium, which comprises radiation, to be active at said matter, said medium being varied by variations in said matter, at least part of the emitted medium passing through said matter and the varied medium which has passed through said matter being received at detecting means at a diametrically opposite side of said stream to said emitting means, and preventing said detecting means from receiving the medium directly from the emitting means, and in combination with the other recited limitations of claim 121. Claim 122 is allowed by the virtue of dependency on the allowed claim 121.

Regarding claim 123, the prior art fails to disclose or make obvious an apparatus for inspecting matter having detecting means arranged to receive, by passage of the medium through said matter, detection medium varied by variations in said matter, and shielding means arranged to prevent the detecting means from receiving the medium directly from the emitting means and located on a direct path from the emitting means to the detecting means, and in combination with the other recited limitations of claim 123. Claim 124 is allowed by the virtue of dependency on the allowed claim 123.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael P. Stafira
Primary Examiner
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February 16, 2005